**1 LITRETURE SURVEY**

**1.1 Survey on Smart Agriculture Using IOT**

**Shweta A M, Dr V. Nagaveni (2019):** The system will take care of automatic irrigation control and various parameters of the greenhouse can be monitored like Temperature, Humidity and Soil Moisture. The Android Application form the user interface and to record the parameter details we use an application server module. This recorded data can be used for analysis and help in taking decisions.

The main advantage of this paper is that, all the functions to be performed by the Fan and Sprinkler to control the climatic conditions like temperature, relative humidity and soil moisture levels in the Greenhouse environment are all automated and it does not require any human intervention

**1.2 A Literature Study on Agricultural Production System Using IoT as Inclusive Technology**

**Chandhini. K (2016):** An agricultural production system for the agricultural production using IoT technology and implemented it as GUI visualization software was designed.

The IoT based agricultural production system through correlation analysis between the crop statistical information and agricultural environment information has enhanced the ability of farmers, researchers, and government officials to analyze current conditions and predict future harvest.

Additionally, agricultural products quality can be improved because farmers observe whole cycle from seeding to selling using this IoT based agricultural production system.

**1.3 SMART AGRICULTURAL MONITERING SYSTEM USING IOT**

· **D.Betteena Sheryl fernendo August 2020 :**The region has had to face problems of food insecurity and some countries have needed food aid for IDPs and refugees.

Due to the relatively low demographic pressure projected for the future, the presence of some favorable types of climates and other positive factors, including a very wide formal seed supply sector, it should be possible to overcome problems of food insecurity in the region as a whole, and even to use this region to provide food to other food-deficient regions. Opportunities must therefore be created to reach these results.

**1.4 IoT Based Smart Agriculture Monitoring System with Predictive Analysis**

**soukaina bouarourou,abderrahim zannou,abdelhak boulaalam(March 2022 )** Integrating Internet of Things (IoT) techniques into different fields and processing data produced within it can effectively shape the future.

In Precision Agriculture, the use of the IoT features helps to manage crops production by optimizing productivity and reducing environmental concerns based on prediction models.

In this paper, an IoT-based agricultural monitoring system is proposed, which integrates principal component analysis (PCA) feature selection methods and neural network classification techniques for crop productivity prediction. Furthermore, the model system allowed a sensing network to collect data of some crops (Tomatoes, Potatoes, Etc.).

The experimental results show that our proposed model system can make decisions more accurately.

**1.4 IOT based Smart Agriculture Monitoring System Project**

IOT plays a very important role in smart agriculture. IOT sensors are capable of providing information about agriculture fields. we have proposed an IOT and smart agriculture system using automation. This IOT based Agriculture monitoring system makes use of wireless sensor networks that collects data from different sensors deployed at various nodes and sends it through the wireless protocol. This smart agriculture using IOT system is powered by Arduino, it consists of Temperature sensor, Moisture sensor, water level sensor, DC motor and GPRS module. When the IOT based agriculture monitoring system starts it checks the water level, humidity and moisture level. It sends SMS alert on the phone about the levels. Sensors sense the level of water if it goes down, it automatically starts the water pump. If the temperature goes above the level, fan starts. This all is displayed on the LCD display module. This all is also seen in IOT where it shows information of Humidity, Moisture and water level with date and time, based on per minute. Temperature can be set on a particular level, it is based on the type crops cultivated. If we want to close the water forcefully on IOT there is button given from where water pump can be forcefully stopped.

**1.5 IOT based smart agriculture monitoring system**

**N Suma, SR Samson, S Saranya.. Journal on Recent …, (2017)** :Agriculture is the primary occupation in our country for ages. But now due to migration of people from rural to urban there is hindrance in agriculture.

So to overcome this problem we go for smart agriculture techniques using IoT.

This project includes various features like GPS based remote controlled monitoring, moisture & temperature sensing intruders scaring, security, leaf wetness and proper irrigation facilities .

It makes use of wireless sensor networks for noting the soil properties and environmental factors continuously.

**1.6 IoT Based Smart Agriculture & Automatic Irrigation System** (**2022)**

Internet of Things (IoT) enables various applications of **crop growth monitoring** and selection, **automatic irrigation**decision support, etc. Weproposed**ESP8266 IoT Automatic irrigation system** to modernize and improve the productivity of the crop.

This post explains how to make **IoT Smart Agriculture with Automatic Irrigation System** using some simple sensors that are available in the market. We will use **Capacitive Soil Moisture Sensor** to measure moisture content present in the soil. Similarly to measure Air Temperature and Humidity, we prefer**DHT11 Humidity Temperature Sensor.**

Using a **5V Power relay** we will control the **Water Pump.** Whenever the sensor detects a low quantity of moisture in the soil, the motor turns on automatically. Hence, will automatically irrigate the field.

Once the soil becomes wet, the motor turns off. You can monitor all this happening remotely via **Things peak Server** online from any part of the world.

**1.7 IoT based SMART FARMING SYSTEM**

**Yasir fahim , taniya(2018):** sarkar IoT based SMART FARMING SYSTEM for Live Monitoring of Temperature and Soil Moisture has been proposed using Arduino and Cloud Computing .

The System has high efficiency and accuracy in fetching the live data of temperature and soil moisture.

The IoT based smart farming System being proposed via this report will assist farmers in increasing the agriculture yield and take efficient care of food production as the System will always provide helping hand to farmers for getting accurate live feed of environmental temperature and soil moisture with more than 99% accurate results.